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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/716,157
Filing Date: November 18, 2003
Appellant(s): FALTESEK ET AL.

Jon Christensen
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/4/08 appealing from the Office action mailed 12/26/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,709,330	YOKOI et al.	11-1987
GB 2299668A	APPLEBY et al.	10-1996

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

9.1 Claims 1,2, 6, 7, 9-11, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al (hereafter Yokoi) in view of Appleby et al (hereafter Appleby) (GB 2 299 668 A).

Regarding claims 1, 6 and 11, Yokoi discloses a system comprising:

a plurality of audio modules (located at 3a, 3b, 3c and 3d in Fig. 1 or 21a in Fig. 2),

a common control unit (2) in communication with the plurality of audio modules;

an output device (8 in Fig. 1; 39 and 32 in Fig. 2) coupled to the control unit.

Yokoi fails to show that the control unit presents at least audio information received at various of the modules, via the output device, with the presented audio indicative of the presence of individuals or selected environmental conditions in the vicinity of the respective module; and which includes at least one of circuitry or software to automatically analyze audio of characteristic sounds emitted by a fire and received at the control unit with respect to at least one fire signature, to establish if an alarm condition is present in the vicinity of at least one of the modules.

Yokoi teaches the use of a general fire detector mounted on the ceiling. In the same field of endeavor, Appleby teaches the disadvantages of having the ceiling-mounted fire detector (lines 19-31 of p. 1). Most importantly, Appleby pointed out that the ceiling- mounted fire detector would not be effective if it was not properly installed

regarding the dimension of the room. Appleby teaches an alternative fire detector using an audio output transducer and an audio input transducer. A software will automatically analyze the audio of characteristic sounds emitted by a fire (the receiving transducer 6 will receive characteristics sounds emitted by a fire; see lines 7-17 and lines 35-39 of p. 2; p. 3; Fig. 2 shows the filter 14 having frequency band 20-150 Hz; Fig. 3 illustrates the characteristics) and received at a control unit with respect to at least one fire signature (lines 26-31 of p. 3) to establish if an alarm condition is present (abstract, p. 2). Thus, it would have been obvious to one of ordinary skill in the art to modify Yokoi by replacing some of fire detector and sensor with the transducers and the software as taught in Appleby in order to effectively detect the fire and save the lives in an environment where it is difficult to properly install ceiling-mounted fire sensor.

Regarding claim 2, although not clearly illustrated, an audio input device (39) is located at the control unit and transducers are located in at least some of the audio modules (24 or 41) (col. 4, lines 20-23; col. 6, line 58+; abstract).

Regarding Claim 7, the bandwidth of the filter in Appleby is between 20 Hz to 150 Hz (p. 3, line 23).

Regarding claims 9 and 10, Yokoi teaches thermal sensor (5). The software as taught in Appleby would be modified for processing thermal related signals as well as sonic signals.

Regarding claims 25 and 27, Yokoi further discloses a user interface.

9.2 Claims 8, 14, 16, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi and Appleby as applied to claims 1, 11 and 25 above, and further in view of Markowitz et al (hereafter Markowitz) (US006295346B1).

Regarding claims 8, 14, 16, 28 and 29, Yokoi fails to show how to analyze audio using a circuitry or speech recognition software. Yokoi teaches a device includes a general communication channel that allows the worker at a remote location to communicate with a central location (Fig. 5; col. 6, lines 58-65, claim 13) during emergency, including fire emergency (see abstract). Appleby teaches a transducer (6) for receiving sound frequency in an environment (2) that may have fire emergency. Markowitz teaches how to use speech recognition software to help identify the urgent message of individuals, such as message related to fire emergency, from a remote location (col. 7, lines 16-21). A speech recognition inherently enhance the human voice while suppress other sounds. Thus, it would have been obvious to one of ordinary skill in the art to modify Yokoi and Appleby by utilizing speech recognition software as taught in Markowitz in order to help the administer to correctly identify the urgent message from the workers at the remote location during the emergency situation.

(10) Response to Argument

A. Examiner does not agree with appellant's argument with respect to the rejection for claims 1, 2, 6, 7, 9-11, 25 and 27 in view of Yokoi and Appleby.

Appellant alleged that Appleby does not operate in the same way and the does not produce the same results as that of the claimed invention. However, appellant fails to specifically point out and compare any single claimed limitation in the claims on how

Appleby operates differently from the claimed invention, and how Appleby produce different result from the claimed invention. Both Appleby and the present claimed invention would generate the same result, which is to establish if an alarm condition is present in the vicinity of the at least one of the sensors. Both Appleby and the present claimed invention would operate the same way by analyzing audio of characteristic sounds emitted by a fire because the software analyzes the signal characteristic between 20-150 Hz (lines 7-17 and 35-39 of p. 2). Furthermore, the transducer receives all the sound in the environment. Appleby further shows the step of receiving at the control unit with respect to at least one fire signature (lines 26-31 of p. 3).

Appellant alleged that it would not require a fire to trigger the sensor in Appleby. First of all, it appears that appellant agreed that Appleby discloses a sensor for detecting the fire. Appellant tried to destroy reference by attacking its effectiveness. This is irrelevant as long as Appleby teaches the claimed limitation. Appleby's sensor would be triggered by the fire (see abstract) because the sound characteristic within the frequency band 20-150 Hz (Fig. 3) would indicate whether there is an alarm condition present.

Appleby analyzes the audio of characteristic sound emitted by a fire, not the heat, nor the temperature difference. The transducer in Appleby detects sound wave, not heat or temperature. The transducer in Appleby picks up all the sound in the environment. The frequency band 20-150 Hz being analyzed clearly is within the audio bandwidth. Appleby explicitly shows the sound characteristics caused by a fire in Fig. 3.

Since appellant fails to provide any valid reason why Appleby does not teach the claimed limitation, the rejections are proper.

B. Examiner disagrees with appellant's argument with respect to the rejection for claims 8, 14, 16, 28 and 29 in view of Yokoi, Appleby and Markowitz.

Since appellant fails to provide any new argument other than the ones argued before with respect to the limitation "characteristic sounds emitted by a fire", the supporting statement provided for rejection in view of Yokoi and Appleby listed above is applied for the rejection in view of Yokoi, Appleby and Markowitz as well.

C. Examiner disagrees with appellant's argument that a prima facie case of obviousness has not been established.

First of all, appellant fails to identify the claim number that this argument is being referring to. Since appellant mentioned microphones to detect fire as well as personnel within a region R on p. 12, examiner would assume that appellant's argument is intended for rejection for claims 8, 14, 16, 28 and 29. None of the claims specifies an integrated system that uses microphones to detect fire as well as personnel within a region R.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Markowitz teaches utilizing a speech recognition software to analyze the voice from a remote location during fire emergency (col. 7, lines 15-20). The primary reference Yokoi is intended to allow worker at a remote location to have verbal communication with the central location during an emergency. The remote location in Yokoi has a fire detector. Appleby teaches the advantages of using sonic transducer to detect the fire. The transducer in Appleby detects sound frequency. By combining the teaching from Yokoi, Appleby and Markowitz, the remote location not only would have a better fire detection, it also would have a better communication channel with the central location. In the end, the worker's life at the remote location would be better protected.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

pwl

Conferees:

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